

Guidelines for Maximizing Hood Efficiency

Many factors can compromise the efficiency of a hood operation. Most of these are avoidable; thus, it is important to be aware of all behavior that can, in some way, modify the hood and its capabilities. The following should always be considered when using a hood:

- Keep fume hood exhaust fans on at all times.
- Keep unnecessary equipment and glassware outside of the hood at all times.
- Store all chemicals in approved storage cans, containers or cabinets (not in the fume hood).
- If possible, position the fume hood sash so that work is performed by extending the arms under or around the sash, placing the head in front of the sash, and keeping the glass between the worker and the chemical source. The worker views the procedure through the glass, which will act a primary barrier if a spill, splash, or explosion should occur.
- Avoid opening and closing the fume hood sash rapidly, and avoid swift arm and body movements in front of or inside the hood. These actions may increase turbulence and reduce the effectiveness of fume hood containment.
- Place chemical sources and apparatus at least 6 inches behind the face of the hood.
- Place equipment as far to the back of the hood as practical without blocking the bottom baffle.
- Separate and elevate each instrument by using blocks or racks so that air can flow easily around all apparatus.
- Do not use large pieces of equipment in a hood, because they tend to cause dead spaces in the airflow and reduce the efficiency of the hood.
- If a large piece of equipment emits fumes or heat outside a fume hood, then have a special-purpose hood designed and installed to ventilate that particular device. This method of ventilation is much more efficient than placing the equipment in a fume hood, and it will consume much less air.
- Do not modify fume hoods in any way that adversely affects the hood performance. This includes adding, removing, or changing any of the fume hood components, such as baffles, sashes, airfoils, liners and exhaust connections.